

NEW YORK CITY TAXI AND LIMOUSINE COMMISSION

Request For Information Regarding Vehicle “Black Boxes” and Related Equipment

In coordination with the NYPD, DOT, other City agencies and members of the for-hire industries, the New York City Taxi and Limousine Commission (“TLC”) is exploring initiatives to work toward the City’s “Vision Zero” goal of zero traffic fatalities. One initiative TLC is currently exploring is the usefulness and feasibility of black box recording devices, which record driver behavior, as tools to reduce driving behaviors that lead to collisions.

What should responders focus on for this RFI?

TLC is exploring inviting interested parties to participate in a pilot program involving the use of black box recording devices in TLC-licensed vehicles. Information obtained through this RFI may be used to help determine the scope, timing, participation criteria, and evaluation metrics of the pilot program. Although black boxes have many uses, such as facilitating post-collision investigations, TLC is particularly interested in learning how black box recording devices have been or could be used as tools to improve driving behaviors. Information on this topic would be particularly useful.

Some black box recording devices work with equipment that provides additional functionalities, such as driver alerts or speed governance. TLC plans to request information on these types of equipment in a future RFI. Respondents to this RFI may include information on these additional functionalities at this time or may wait for more specific questions on these technologies in the forthcoming RFI.

About what types of black boxes is TLC requesting information?

TLC’s focus in this RFI is to collect data on “black boxes” rather than event data recorders (EDRs). “EDR” is the term the National Highway Traffic Safety Administration uses to refer to the device very commonly installed in vehicles that records technical data for a brief period in the event of a collision. This is in contrast to the “black boxes” we refer to in this RFI, which record data continuously while a vehicle is in operation and capture more data than do EDRs.

TLC invites interested parties to submit information regarding one, several, or all of the below topics. Each section of a submission should begin by referencing which of the below numbered topics it is addressing.

All information or suggestions should be submitted by March 31, 2014.

General Information Requested

TLC welcomes input from the public, safety experts, individuals with legal or legislative expertise on black box data collection and use, and entities that participate in the NYC taxi industry on how black boxes are currently being used and ideas for how they could be used to promote safety in TLC-regulated industries.

This Request for Information (“RFI”) seeks to obtain information regarding:

1. **Current Uses of Black Boxes.** The ways in which different entities, such as fleets, drivers, owners, bases, regulators, law enforcement, and insurance companies, currently use black box

data. Examples could include investigation of insurance claims, identification of areas in which drivers need additional training, identification of drivers who may be in distress, identification of unsafe drivers, investigation of alleged criminal activity, enforcement of vehicle traffic law, or other uses.

2. **Effectiveness of Black Boxes.** Evidence of the efficacy (or lack of efficacy) of black boxes and related technologies (e.g., cameras) in reducing collision rates or reducing dangerous driving behaviors, such as speeding and distracted driving.
3. **Business Models for Black Boxes.** Business models surrounding black box equipment, including which party or parties pay for the equipment and what financial or non-financial incentives fleets, vehicle owners, and drivers have to use black box recording devices.
4. **Parties Interested in Working with Black Boxes in TLC-Regulated Industries.** Existing or potential partnerships between TLC-regulated vehicle/medallion owners and other organizations, such as black box equipment providers, insurance companies, or banks/lenders, which could facilitate implementation of a potential pilot program.
5. **Challenges Associated with Using Black Boxes.** Common challenges black boxes and related equipment face, such as connectivity problems, opportunities for user error/tampering, need for manual retrieval of data storage devices from equipment, privacy concerns, legal constraints, etc.
6. **Legislative or Regulatory Action Surrounding Black Boxes.** Actions regulators or organizations that set professional standards are undertaking or plan to undertake that could impact whether or how black boxes could be most effectively used to promote safe driving.

Specific Information Requested

TLC welcomes information about specific equipment capabilities from hardware/software makers, black box users, and other individuals who are knowledgeable about black boxes.

This Request for Information (“RFI”) seeks to obtain information regarding:

Basic Black Box Features

7. Descriptions of black box recording equipment and related equipment (e.g., cameras).
8. Data points collected (e.g., speed, high G-force incidents, braking and acceleration patterns) including the source of each (e.g., GPS unit, camera, black box, accelerometer) and ability to flag from processed data certain types of driver behavior, such as speeding, distracted driving, aggressive driving, or erratic driving.

Black Box System Costs

9. Description and cost per unit of primary recording equipment.
10. Descriptions and costs per unit of complementary equipment, such as cameras that are integrated with black box recording systems.
11. Installation, maintenance, and ongoing/recurring costs per black box/camera unit, per vehicle and/or per megabyte as applicable (e.g., data storage and/or transmission).
12. Durability of the systems, including the typical lifespan and crashworthiness of system components.

Relationship between Black Box and Rest of Vehicle

13. Installation/wiring diagrams detailing the black box hardware components’ touch points to the vehicle’s mechanical equipment and other data sources.

14. Relationship between black box operation and the operation of the vehicle itself and other in-vehicle systems (e.g., the battery draw of the system, the interaction between black box wireless transmittal and other wireless devices in the vehicle/shielding, regulations governing black boxes, placement of black box and related hardware in vehicle, necessary vehicle disassembly/assembly for installation).

Data Transmission Frequency and Mechanism.

15. Frequency of data collection (i.e., whether data streams are continuously recorded and retained or triggered by specific events), and whether this differs among component parts (e.g., whether video data are recorded with same frequency as speed data or other vehicle data).
16. Means of data transmission from black boxes by authorized users, such as real-time cellular transmission, wireless or wired aggregate data transfers, or physical removal of memory cards, and whether this differs among component parts (e.g., whether video data are transmitted by same means as speed data or other vehicle data).

Black Box Data Processing and Analytics

17. Data viewing and retrieval platforms available (e.g., in-vehicle displays, online portals, smartphone applications, other diagnostic software) and features included in the platform, and whether raw data can be accessed outside of these software platforms.
18. Timeliness of access to data via platform (e.g., real-time alerts and querying, daily data processing, and aggregation).
19. Credibility, accuracy and reliability of data collected, including examples of black box data being used successfully or unsuccessfully in legal settings.
20. Ability of software platforms to integrate with additional data sources, such as TLC's Taxi/Livery Passenger Enhancement Program (TPEP/LPEP) taximeter point of sale system trip data, TLC electronic administrative databases, Geographic Information Systems (GIS) data such as road network data, and real-time traffic, construction, and weather alert data, either through an API or through other means.
21. Ability of software platforms to integrate with a wide range of black box hardware solutions and sources (e.g. through a common hardware/software standard and/or API or other means).
22. Data storage and transmission requirements (e.g., storage space per 100 vehicles, reception equipment requirements, limitations (if any) on number of vehicles that could be monitored at once).

Privacy and Security

23. Security and privacy precautions used to safeguard collected data, manage access to it, and prevent tampering.

Other Questions

24. The technical feasibility, costs, and advantages/disadvantages of integrating black box data recorders with other in-vehicle technologies (e.g., TPEP/LPEP, security cameras).
25. Case studies of similar implementation of specific black box technology or platforms, particularly as they pertain to promoting safe driving.

All information or suggestions should be submitted by March 31, 2014 to:

Research@tlc.nyc.gov

Or

Dawn Miller
Director of Research and Evaluation
New York City Taxi and Limousine Commission
33 Beaver St., 22nd Floor
New York, NY 10004

Please provide your contact information if you may be interested in meeting with TLC staff to discuss your submission. To facilitate review, we welcome and encourage early submissions. Thank you for your interest in helping the City of New York and TLC-regulated industries in our efforts to eliminate traffic fatalities.

Disclaimer

It should be understood that this RFI will not result in any type of procurement for any system or for any goods and services at this time. This RFI does not represent a commitment on the part of the City to enter into any type of agreement with the companies, groups, or individuals that choose to respond. The information provided by respondents will not be used by the City to pre-qualify respondents or in any other way determine eligibility for the purposes of any procurement that may be undertaken in the future.

Vendors should note that no contract will be awarded pursuant to this RFI. Likewise, submission of a response to this RFI will not enhance any vendor's chances to be included in any preferred vendor's list. No responses to this RFI will be confidential, proprietary, or non-disclosable pursuant to the New York State Freedom of Information Law, Public Officers Law Article 6 Sections 84-90.